

REMARKS

The application has been amended to place it in condition for allowance at the time of the next Official Action.

Claims 1, 2, 4-12, 14, 16, 18, 19 and 21 are pending in the application.

Claim 10 is amended as suggested to address the 35 USC 112, second paragraph rejection.

Claim 1 is amended to clarify that "second" refers to the container to address the claim objection.

Claims 1, 4-8 and 10 were rejected under 35 USC 102(b) as being anticipated by ROGERS 1,444,087. That rejection is respectfully traversed.

Claim 1 recites that the state of the shuttle valve determines whether motive gas enters into, or is vented from, the first container, thereby implementing the pressurization/depressurization cycle.

ROGERS does not disclose that a motive gas enters into, or is vented from, the first container, thereby implementing the pressurization/depressurization cycle. That is, ROGERS does not disclose using a motive gas such as steam as the motive fluid to enable the device to pump condensate.

Rather, ROGERS teaches that the well to be filled with water should be great enough in volume to cause the water relayed into the pump chamber to close the exhaust valve 13 (see page 2,

lines 76-83). Otherwise, compressed air could blow from pipe 2 right through the pump and out the exhaust port 16.

As recognized in ROGERS, when pumping the condensate leaving steam heated vessels, heat exchangers, or even, condensate collecting vessels, it is normal at certain times for the flow of condensate to be much less than the maximum flow that the pump must be capable of handling. In view of this, the pump of ROGERS would then discharge all the condensate that had reached it. The steam pressurizing the lower chamber 4 would then blow through into chamber 7 and exit through the exhaust valve 13. Chamber 4 being full of steam at just above atmospheric pressure could not then refill even if the condensate flow increased.

Moreover, claim 1 further defines over ROGERS based on the following differences:

1) ROGERS has a float operated valve 19 that opens on low level in the pumping chamber, to pressurize the fluid motor 17. Claim 1 requires the use of a float operated valve in a small subsidiary chamber, that opens at high level in the pumping chamber and lowers the pressure in a short length of small diameter pipe very quickly, to make a shuttle valve change position. Valve 11, offered in the Official Action, opens to pressurize container 7 (see page 2, lines 25-32 of ROGERS, wherein pump chamber 7 is discharged by compressed air when valve 11 is open). Container/pump chamber 7 is similar to the recited

second container. By contrast, the recited pilot valve opens to pressurize the chamber of the first container.

2) ROGERS uses a float operated valve to close the pumping chamber exhaust passage, and a mechanical lever operated by a push rod to open it. The exhaust valve of the present invention is either one of the passages in a pressure operated shuttle valve, or an air operated valve actuated through a shuttle valve.

3) All the equipment on the left hand side of the Figure of ROGERS i.e., push rod 36, lever 35, fluid motor 30 and valves 26 and 29, are used only to push water from a low level chamber 4 up to the pumping chamber 7. That is, the recited outlet (of the first container) is different from the connection to the second container. As the recited pump does not include any of this equipment, it is apparent that the structure of ROGERS is different from the pump apparatus recited in claims 1 and 10.

4) ROGERS has two float and valve mechanisms within the pumping chamber. Maintenance of these following wear or damage entails dismantling all the external mechanisms and the top cover of the chamber 7 and in a large capacity unit could well require the use of lifting tackle. By contrast, the recite pump apparatus has a small float valve only, with no parts (requiring maintenance) within the pumping chamber.

Claims 6 and 10 include similar features and the analysis above regarding claim 1 as to the similar features also applies to claims 6 and 10.

Further, as to claim 10, the pump of ROGERS is a single unit, though having two chambers. Discharge of liquid into the delivery pipe is intermittent as with all single unit pressure pumps. Were a second unit to be installed alongside, no means are provided by ROGERS to make the units discharge alternately.

In view of the above, it is apparent that ROGERS does not disclose each of the recited elements, and thus, ROGERS is not anticipatory.

Claims 9, 11, 12, 14 and 18 were rejected under 35 USC 103(a) as being unpatentable over ROGERS in view of EMMONS 1,006,540. That rejection is respectfully traversed.

EMMONS does not overcome the shortcomings of ROGERS set forth above with respect to claims 1 and 10. Claims 9, 14 and 18 and 11-12 depend from claim 1 and 10 respectively and further define the invention and are believed to be patentable at least for depending from an allowable independent claim.

Claims 2, 16 and 19 were rejected under 35 USC 103(a) as being unpatentable over ROGERS in view of JURGEN 5,582,469. That rejection is respectfully traversed.

JURGEN is only cited with respect to features of the dependent claims. JURGEN does not overcome the shortcomings of ROGERS noted above. Accordingly, claim 2, 16 and 19 are believed

to be patentable at least for depending from allowable independent claim 1.

Claim 21 was rejected under 35 USC 103 (a) as being unpatentable over ROGERS in view of YUMOTO 6,015,267. That rejection is respectfully traversed.

YUMOTO is only cited for a container capable of using steam as the motive fluid. YUMOTO does not overcome the shortcomings of ROGERS set forth above with respect to claim 1. Since claim 21 depends from claim 1 and further defines the invention, claim 21 is believed to be patentable at least for depending from an allowable independent claim.

In view of the present amendment and the foregoing Remarks, it is believed that the present application has been placed in condition for allowance. Favorable reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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